I was involved for over 40 years in the pulp and paper industry and therefore spent a great deal of my working life at large integrated pulp and paper mills, mostly in northern New England. My comments regarding policies affecting biomass power plants in Massachusetts are based on my experiences and observations during that period (1959 to 2004).

Biomass can be a good thing. Whenever renewable plant-based fuels are used in a well-designed and operated cogeneration power plant to produce both electrical energy and usable heat it is a wise and beneficial use of scarce natural resources. We have had numerous examples of such facilitities both here in Massachusetts and in neighboring states; for instance, those at Cooley Dickinson Hospital, Mt Wachusett Community College, UMass, Northfield Mount Hermon School, Indev* (in conjunction with Strathmore Paper in Turners Falls) plus Middlebury College and the city of Burlington, both in Vermont.

Therefore, I believe we must look at the whole picture whenever considering biomass plants here in Massachusetts. This means evaluating the economic, ecological, and environmental factors associated with these facilitities - factors like efficiency, location, and size and/or scale.

Efficiency. It is well-known tha t it makes very little sense to build biomass plants that only produce electricity because it is so inefficient. A simple analogy compares it to boiling water in a kettle for a cup of tea just to hear it whistle, and then pouring the unused hot water down the drain. The ideal is cogeneration - simultaneous production of electrical power and usable heat, either in the form of low pressure steam (as at Indev when it was operating in conjunction with Strathmore Paper) or hot water (like at Cooley Dickinson Hospital) so you can achieve efficiencies in the 80% to 90% range.

Location. One thing in common with all the successful cogeneration systems I'm familiar with is the power plant (i.e. boiler) is always located in close proximity to the unit that benefits from the exhaust energy leaving the turbogenerator. In the above examples, Indev was located right next to Strathmore Paper, and the boiler at Cooley Dickinson is in an adjacent building. Likewise, the systems for schools and colleges are placed right on their campuses, whereas the one for Burlington, VT is close to their downtown. In the case of integrated pulp and paper mills, they are on the same plant site within walking distance of each other.

Size and/or Scale. This is the nub of the matter since we are dealing with both renewability as well as sustainability. In northern New England, the owners of the large forested tracts are either the paper companies themselves or independent entities with whom they have long-term contracts to supply them with wood. They calculate their vast holdings in units of square miles, not in units of acres as we do here in Massachusetts. Since there are 64 acres in one square mile, this is a huge multiplier. These integrated mills have tremendous investments in plants and equipment to make paper - so they are looking for a sustainable guaranteed wood supply on a long-term basis. Along with large volumes of water, it is their life blood. To help them achieve this, they have trained foresters, plant geneticists, fiber morphologists, etc. on their staffs. They plant about 3 times more trees than they harvest in a given year using species they've developed and grown on their own tree farms to obtain the optimum growth and fiber characteristics for the paper they make. Over the years, they have built a network of railroads and logging roads to efficiently deliver the wood from the forests to various mill sites. The point I'm trying to make is that growing and harvesting trees in northern New England on a sustainable basis is very serious business, and the companies are obviously in it for the long haul.

Now compare this to what we now have here in Massachussetts. We have many small landowners that essentially act independently, and over whom no one company or entity exercises a controlling interest (at least not that has been revealed publicly to date). What entity is going to encourage or enforce sustainable forestry practices in Massachusetts? How can we depend on these many relatively small landowners to sustainably supply the long-term needs (think 20 to 25 years) of the several large scale biomass plants (think up to 1,500 tons/day) currently being proposed for Massachusetts? This question is crucial. Unfortunately, from what I've seen and know, I'm very skeptical that it can or should be done for the plants currently being proposed here in western Massachusetts.

I hope these comments are helpful in your deliberations and subsequent decision-making.

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*Note: The Indev cogenerating plant mentioned above did use a fossil fuel (coal) to fire the boiler; thus it wasn't a true biomass facility. It was, however, extremely efficient since the exhaust low pressure steam exiting the turbogenerator was captured and used in the adjacent Strathmore mill to dry the paper.